



WORKING PAPER

ASSEMBLY — 38TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection

EUROPEAN VIEWS ON THE LOCAL ENVIRONMENTAL IMPACTS OF AVIATION

(Presented by Lithuania on behalf of the European Union and its Member States¹
and the other Member States of the European Civil Aviation Conference²)

EXECUTIVE SUMMARY

Europe welcomes the progress being made at ICAO in addressing the local environmental impacts of aviation, including the decision at CAEP/9 on a new Chapter 14 noise standard and the good progress being made in CAEP on developing a standard for non-volatile particulate matter (nvPM). Such progress is especially important given the increasing constraints on air transport growth being imposed in light of its environmental impacts in the vicinity of airports. These impacts are becoming an increasing concern at and around many European airports. Europe supports effective implementation of the balanced approach, and the European Commission has submitted a legislative proposal to strengthen its implementation in the European Union. Aircraft engine manufacturers should be encouraged to contribute actively to the work on the sampling and measuring of nvPM on different engine types to allow the adoption of a high-quality nvPM standard at CAEP/10.

Action: The Assembly is invited to consider the recommendation in a) and to adopt for inclusion in the resolution the proposed text in b) and c) below:

- a) note that the development of international aviation is confronted with increasing constraints as a result of strong local political opposition to the growing environmental impacts at congested airports located in areas of high population density;
- b) welcome the results achieved at CAEP/9, including in particular the agreement to apply a new Chapter 14 noise standard from 2017, and from 2020 for aircraft of less than 55 tonnes in weight, consistent with the first pillar of the balanced approach (reduction of noise at source); and
- c) encourage aircraft engine manufacturers to cooperate as necessary to support the sampling and measurement effort needed to allow the adoption of a high-quality nvPM standard at CAEP/10.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective C – <i>Environmental Protection and Sustainable Development of Air Transport</i> .
<i>Financial implications:</i>	Most of the ICAO activities referred to will be covered under the regular budget of the organisation.
<i>References:</i>	ICAO Assembly Resolution A37-18, <i>Consolidated Statement of continuing ICAO policies and practices related to environmental protection – General provisions, noise and local air quality</i> .

¹ Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

² Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Iceland, the Republic of Moldova, Monaco, Montenegro, Norway, San Marino, Serbia, Switzerland, The former Yugoslav Republic of Macedonia, Turkey and Ukraine.

1. INTRODUCTION

1.1 Local environmental impacts continue to impose significant constraints on the future development of air traffic. Vocal political opposition to airport expansion by local communities in the vicinity of airports is particularly strong in Europe, but is also increasingly an issue in other parts of the world where air transport is developing quickly and is fundamental to their economic progress. The health impacts of noise annoyance and of local emissions are becoming a growing concern for local communities and authorities and scientific research in these areas is progressing.

1.2 Furthermore, the forecast significant growth in air traffic between today and 2036 will considerably intensify the local environmental impacts if no ambitious action is taken to mitigate them. According to the latest assessment of the ICAO Council's Committee on Aviation Environmental Protection (CAEP), the total global population exposed to aircraft noise above 55 DNL is projected to grow significantly from 21.2 million in 2006 to between 26.6 and 34.1 million in 2036. With respect to local emissions, the ICAO assessment has also forecast that global NO_x emissions below 3000 feet are projected to grow from a baseline of 0.25 million metric tonnes in 2006 to between 0.52 Mt and 0.72 Mt in 2036. The growth of particulate matter (PM) emissions below 3000 feet follows similar trends to NO_x, i.e. more than doubling of global PM emissions from a 2006 baseline.

2. NOISE AT AIRPORTS

2.1 One of ICAO's main environmental goals is to limit or reduce the number of people affected by significant noise. Although tremendous progress in the reduction of noise exposure has been achieved, in particular in terms of maximum noise levels around airports, the situation remains a major problem for many airports and authorities. Noise exposure around airports is the dominant subject of complaints for populations living around airports and in recent years it has constrained traffic growth at many airports. This is particularly so in Europe with its high population density around current airports and few options for new airports. Airport authorities are facing a growing sensitivity on the part of local residents to increases in noise annoyance and a greater awareness of associated health impacts.

2.2 Noise annoyance at airports feeds a lively debate on the health impacts of aircraft noise, especially with respect to night flights. The opposition from local communities leads to demands for operating restrictions and limitations on airport expansion. After full consideration of the specific situation at each airport, and in compliance with the balanced approach, operating restrictions are having to be introduced at many busy European airports. When building new runways, the introduction of operating restrictions might be the only way to balance the interests of residents in the airport's vicinity with those of passengers, the airlines, and the airport itself.

2.3 CAEP/9

2.3.1 Europe appreciates the high-quality assessment work done by CAEP, which led to the very welcome decision at CAEP/9 to apply a new Chapter 14 noise standard from 2017, and from 2020 for aircraft less than 55 tonnes in weight. All States will soon be in a position to give evidence to the local communities of the significant achievements delivered by the ICAO/CAEP work, with this demonstrable progress made under the first pillar of the balanced approach to noise management at airports - noise reduction at source.

2.3.2 States are now being consulted on the new noise standard. Europe is fully supportive of the adoption of the new Chapter 14, and also supports the recommendation by CAEP/9 that the new Chapter 14 should not be used for the introduction of operating restrictions at airports.

2.4 **The Balanced Approach**

2.4.1 Europe considers that it is important that the balanced approach to noise management at airports is adhered to by States and is implemented in a transparent and consistent manner. It is of particular importance that all measures are considered and analysed for their relative cost-effectiveness before the introduction of operating restrictions is contemplated.

2.4.2 The Europe Union is envisaging a strengthening of the implementation of the balanced approach through a revision of the existing EU regulation. This may address the formal steps of the process and will not prejudice the appropriate level of protection from air traffic noise or the substance of the noise mitigation measures, which fall within the remit of EU Member States.

3. **LOCAL AIR QUALITY**

3.1 Europe welcomed the adoption by ICAO at CAEP/8 of a new NO_x standard, and has been actively engaged in the on-going work by CAEP to develop a standard for non-volatile Particulate Matter (nvPM) under both the CAEP/9 and now the CAEP/10 cycles.

3.2 Europe also welcomes the progress on nvPM that was achieved under the CAEP/9 cycle, which now means that there is a strong likelihood that it will be possible to establish a nvPM certification requirement and related standard by CAEP/10.

3.3 However, this further progress will depend heavily on the work that will be carried out by the engine manufacturers. This entails the installation of the sampling and measurement systems, their validation at the manufacturer's site, and the measurement of both new and in-production engines during test campaigns. This will build confidence in the specifications of the sampling system and will allow the building of a data bank which will provide a technology-related overview of the nvPM engine emissions. The future European test campaigns will contribute to these efforts.

4. **CONCLUSION**

4.1 Europe supports the continuing work of ICAO on addressing the local environmental impacts of aviation. The contribution of ICAO, notably through CAEP, to improving scientific knowledge and to the adoption of international standards, is of great importance in light of the increased sensitivity of local communities and authorities with respect to the health impacts of noise and emissions in and around airports, and the constraints this can place on the air transport sector and its future development.

— END —